SANTA CRUZ BIOTECHNOLOGY, INC.

FOXO6 siRNA (m): sc-145227

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The forkhead box (FOX) family of transcription factors represent a group of proteins that share a common FOX DNA-binding domain and play important roles in cell- and tissue-specific protein expression during development. FOXO6 (forkhead box O6) is a 559 amino acid mouse protein that localizes to both the nucleus and the cytoplasm and contains one forkhead DNA-binding domain. Expressed in developing brain tissue, including areas of the nucleus accumbens, cingulate cortex, parts of the amygdala and in the hippocampus, FOXO6 functions as a transcriptional activator that mediates the transcription of target genes during murine development.

REFERENCES

1. Jacobs, F.M., et al. 2003. FOXO6, a novel member of the FOXO class of transcription factors with distinct shuttling dynamics. J. Biol. Chem. 278: 35959-35967.
2. Katoh, M. and Katoh, M. 2004. Human FOX gene family (Review). Int. J. Oncol. 25: 1495-1500.
3. Wijchers, P.J., et al. 2006. Identi-fication of forkhead transcription factors in cortical and dopaminergic areas of the adult murine brain. Brain Res. 1068: 23-33.
4. Hoekman, M.F., et al. 2006. Spatial and temporal expression of FOXO transcription factors in the developing and adult murine brain. Gene Expr. Patterns 6: 134-140.
5. Bouchard, C., et al. 2007. FOXO transcription factors suppress Myc-driven lymphomagenesis via direct activation of ARF. Genes Dev. 21: 2775-2787.
6. Huang, H. and Tindall, D.J. 2007. Dynamic FOXO transcription factors. J. Cell Sci. 120: 2479-2487.
7. Maiese, K., et al. 2009. A "FOXO" in sight: Targeting FOXO proteins from conception to cancer. Med. Res. Rev. 29: 395-418.

CHROMOSOMAL LOCATION

Genetic locus: Foxo6 (mouse) mapping to 4 D2.2.

PRODUCT

FOXO6 siRNA (m) is a pool of 2 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FOXO6 shRNA Plasmid (m): sc-145227-SH and FOXO6 shRNA (m) Lentiviral Particles: sc-145227-V as alternate gene silencing products.

For independent verification of FOXO6 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145227A and sc-145227B.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

FOXO6 siRNA (m) is recommended for the inhibition of FOXO6 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FOXO6 gene expression knockdown using RT-PCR Primer: FOXO6 (m)-PR: sc-145227-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.